Space Weather Forecast

Issued on Thursday, 11 August 2022 at 01:13 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

Space Weather Forecast Headline: Slight chance of isolated Minor Geomagnetic Storms on 11 August.

Analysis of Space Weather Activity over past 24 hours

Solar Activity: Solar activity has been Very Low, with no significant flare activity. There are five sunspot regions on the disc, with all of these benign and relatively inactive. No Coronal Mass Ejections (CMEs) were visible in available imagery.

Solar Wind / Geomagnetic Activity: Solar winds have been mainly elevated and occasionally strong, as the Earth is influenced by a fast solar wind. Total interplanetary magnetic field strength has been weak, with the north-south component also varying weakly. Geomagnetic activity was Quiet to Unsettled (Kp 2 to 3).

Energetic Particles / Solar Radiation: No solar radiation storms were observed.

Four-Day Space Weather Forecast Summary

Solar Activity: Solar activity is likely to be Very Low or Low, with a chance of isolated Common-class flares.

Solar Wind / Geomagnetic Activity: No CMEs feature in the current forecast. Solar wind speeds are expected to be mainly elevated through the next two days due to a fast solar wind. A gradual decline is then anticipated through to day 4. Geomagnetic activity is expected to be mainly Quiet, occasionally Unsettled through much of the period. There is a slight chance of isolated Active or G1/Minor Storms at first, but with a diminishing risk through the period.

Energetic Particles / Solar Radiation: No solar radiation storms are expected given the current relatively few and magnetically simple cohort of sunspots.

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

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Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	10	5	1	1
Strong	G3	No	1	1	1	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	No	5	5	5	5
Very Active	R3 to R5 X	No	1	1	1	1

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	1	1	1	1
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

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